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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,649	03/15/2002	Mark E. McDonald	NUFO-029	4974

7590

03/01/2004

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EXAMINER

JACKSON, CORNELIUS H

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/099,649

Applicant(s)

MCDONALD ET AL.

Examiner

Cornelius H. Jackson

Art Unit

2828

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-35,40,41 and 43-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-35,40,41 and 43-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/06/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgment

1. Acknowledgment is made that applicant's Amendment, filed on 06 November 2003, has been entered. Upon entrance of the Amendment, claims 1, 2, 17, 19-24, 40, 41, 43-52 were amended, claims 3-7, 36-39 and 42 were cancelled and claims 55-66 were added.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 8-19, 25-35, 40, 41, 43-55, 57-59 and 61-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasuda et al. (4947398). Regarding claim 1, Yasuda et al. disclose an optical tuning apparatus **Fig. 4**, comprising: a first tunable wavelength selection element **4** configured to define a first plurality of tunable transmission peaks separated by a first adjustable free spectral range; a second tunable wavelength selection element **5** configured to define a second plurality of tunable transmission peaks separated by a second adjustable free spectral range; and a controller **13**, operatively coupled to each of the first and second tunable wavelength selection elements and all the other stated limitations, **see Figs. 3a-c and 5, col. 4, lines 10-60 and col. 10, line 45-col. 12, line 34.**

Regarding claim 2, Yasuda et al. disclose at least one joint transmission peak is adjustable according to tuning of said first and second tunable wavelength selection elements, **see Figs. 3a-c and 5.**

Regarding claims 8-10, Yasuda et al. disclose what said first and second tunable wavelength selection elements may comprise of, **see col. 1, lines 7-13, col. 9, line 42-col. 10, line 9 and col. 11, lines 4-11 .**

Regarding claims 11 and 12, Yasuda et al. disclose at least one of said first and second etalons is thermo-optically tunable or electro-optically tunable, **see col. 4, line 48-col. 11, line 40 and col. 18, line 23-col. 19, line 11.**

Regarding claims 13-15, Yasuda et al. disclose all the stated limitations, **see Figs. 3a-c and 5, col. 4, lines 10-60 and col. 10, line 45-col. 12, line 34.**

Regarding claims 16-18, Yasuda et al. disclose all the stated limitations, **see col. 10, line 45-col. 12, line 34.**

Regarding claim 19, Yasuda et al. disclose a laser apparatus, comprising a base (inherent); a gain medium 1 operatively coupled to the base, to emit a light beam 6 in response to an electric input V; a first tunable wavelength selection element 4 operatively coupled to the base and positioned in the light beam 6, said first tunable element configured to define a first plurality of transmission peaks; a second tunable wavelength selection element 5 operatively coupled to the base and positioned in the light beam 6, said second tunable element configured to define a second plurality of transmission peaks; a controller 13, operatively coupled to each of the first and second tunable wavelength selection elements and all the other stated limitations, **see Figs. 3a-c, 4 and 5, col. 4, lines 10-60 and col. 10, line 45-col. 12, line 34.**

Regarding claims 25-39, 52-55, 59, 63 and 64, see corresponding claim rejection above.

Regarding claims 40-51, the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, the rejection used against the device, stands for the method as well.

Regarding claims 56-58 and 61-62, the presence of process limitations on product claims, which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. In re Stephens 145 USPQ 656 (CCPA 1965).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 20-24, 56, 60, 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuda et al. (4947398). Regarding claim 20, Yasuda et al., as applied to claims 1, 2, 8-19, 25-35, 40, 41, 43-55, 57-59 and 61-64 above, teaches all the stated limitations except for the gain medium comprises a diode instead of a gas laser, Applicant shows that the gas laser is an equivalent structure known in the art, **see page 4, [0011]**. Therefore, because these two lasers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the gas laser for a diode.

Regarding claims 21-24, see corresponding claim rejection above.

Regarding claims 56, 60 and 65, it has been held "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Regarding claim 66, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ any type of etalon, e.g. planar, wedge-shaped, liquid or gas filled etalon, for their ability to filter specific wavelengths, since it

has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Response to Arguments

7. Applicant's arguments filed 06 November 2003 have been fully considered but they are not persuasive.

Applicant argued, "A claim is anticipated only if each and every element of the claim is found in a single reference" and "[T]he identical invention must be shown in as complete detail as is contained in the claim."

In response, each and every element of the claim is found in the single reference, Yasuda. The invention is identical and in as complete detail as is contained in the claim, since all the structural elements of the claimed invention are positioned as claimed. the presence of process limitations on product claims, which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens* 145 USPQ 656 (CCPA 1965).

Applicant argued, "It is clear *that* Yasuda does not employ Vernier tuning, or use tunable wavelength selection elements with adjustable free spectral ranges."

In response, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a

process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Also Yasuda does use tunable wavelength selection elements with adjustable free spectral ranges, see **Figs. 2a-d and 10a-e; and the specification related to those Figs.**

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is


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(571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (571)272-1941. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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